In the Drawings:

The attached sheets of drawings include changes to Figs. 16-19. Annotated sheets showing the changes are attached. The replacement sheets contain the words "Prior Art" and replace the originally filed sheets.

REMARKS

As a preliminary matter, applicants appreciate the indication of allowable subject matter in claims 3-4, 9-10, 15, 18, 19, 22 and 25-26.

The drawings have been amended as required. Approval and withdrawal of the objection to the drawings is requested.

Claims 1-2, 5-8, 11-14, 16-17, 20-21 and 23-24 stand rejected under § 103 on the basis of Ogino et al. and Robinson, Jr. Applicants traverse this rejection because Robinson does not teach a gate-on voltage corresponding to a magnitude of a change of the vertical scanning frequency or the horizontal scanning frequency detected at the detection step, as in the present invention.

The gate-on voltage is a voltage of an on time of a gate signal applied to a gate electrode of a TFT formed as a liquid crystal drive switching element in each pixel (see page 1, lines 15-23 and page 14, lines 20-21 of the specification). The common voltage is a voltage applied to a common electrode (see page 14, lines 10-11 of the specification). The gate-on voltage and the common voltage are necessary to drive the liquid crystal display device. In the present invention, the gate-on voltage corresponds to the magnitude of a change of the vertical scanning frequency or the horizontal scanning frequency detected at a detecting step.

The examiner recognizes that Ogino does not disclose this feature. Moreover, the crosshatch signal of Ogino is not a signal for driving the display device. The crosshatch signal is the image signal displayed on a screen (see col. 2, lines 7-10 and Fig. 1(A) of Ogino).

Robinson discloses a CRT (see col. 7, line 28 to col. 9, line 17 of Robinson). However, the CRT does not have the TFT formed in the pixel and the common electrode. Thus, the gate-on voltage and the common voltage are unnecessary to drive the CRT.

Furthermore, column 4, lines 45-47 of Robinson teach a control signal that slowly changes in value in accordance with the magnitude of a filtered signal 20a. The control signal is based on the value of the filtered signal 20a, and not a change in the magnitude, that is, the difference in the magnitudes at different values.

Column 5, lines 13-15 of Robinson teaches a gating circuit 28b that receives varying-frequency square wave enabling signals 36b from a voltage controlled oscillator 30b. A level detector 32b samples the amplitude of a modulating signal 20b to produce control signals 34b that are fed to a voltage controlled oscillator 30b. This cited portion of the text also appears to fail to teach the feature of a change in the magnitude.

Finally, column 6, lines 15-18 of Robinson teaches a differentiator whose output takes the form of a sequence of spikes that vary in time depending on the frequency variations of the modulating signal 20c. This cited portion of Robinson also fails to disclose a gate-on voltage corresponding to a magnitude of the change of the scanning frequency.

Accordingly, withdrawal of this rejection is respectfully requested.

For the foregoing reasons, applicants believe that this case is in condition for allowance, which is respectfully requested. The examiner should call applicant's attorney if an interview would expedite prosecution.

Respectfully submitted,

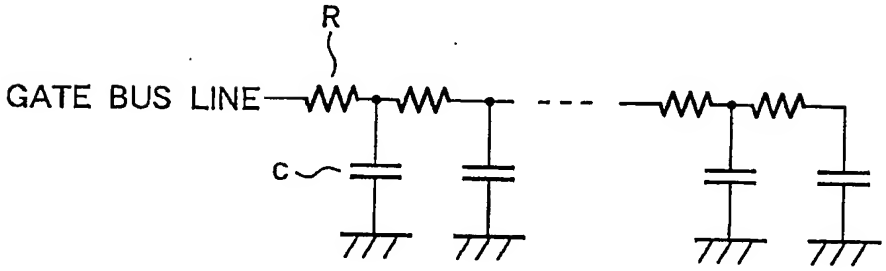
GREER, BURNS & CRAIN, LTD.

By 
Patrick G. Burns
Registration No. 29,367

June 5, 2007
300 South Wacker Drive
Suite 2500
Chicago, Illinois 60606
Telephone: 312.360.0080
Facsimile: 312.360.9315
Customer No. 24978

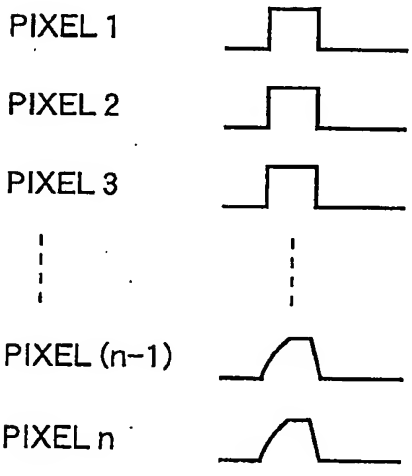
Prior Art

FIG.16



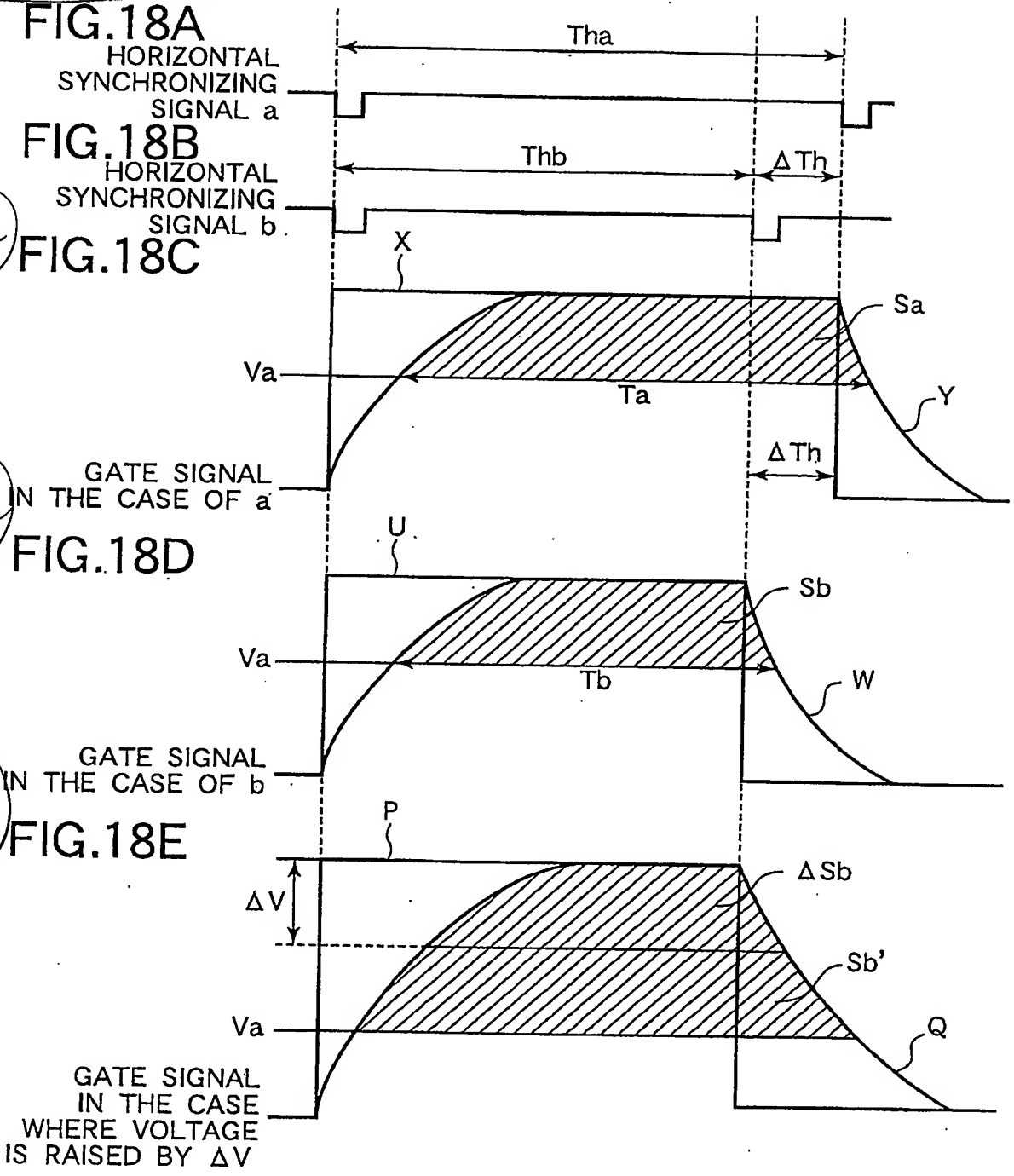
Prior Art

FIG.17



Prior Art

FIG.18A



Prior Art

FIG.18B

Prior Art

FIG.18C

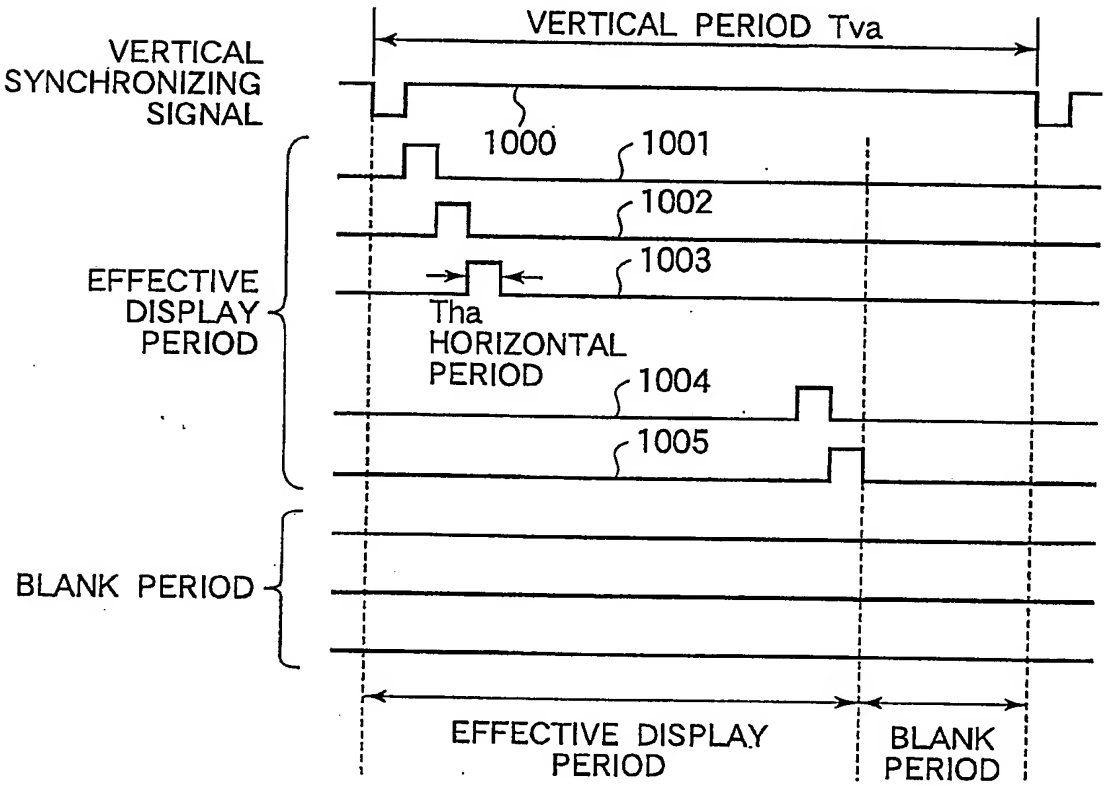
Prior Art

FIG.18D

Prior Art

FIG.18E

FIG.19


VERTICAL PERIOD Tva
VERTICAL SYNCHRONIZING SIGNAL
1000
1001
1002
1003
EFFECTIVE DISPLAY PERIOD
Tha
HORIZONTAL PERIOD
1004
1005
BLANK PERIOD
EFFECTIVE DISPLAY PERIOD
BLANK PERIOD